

## Study Guide for Unit 2 Test

### Ionic Compounds

- What are ions? How are they formed? What determines whether a positive or negative ion is formed?

What is an anion? What is a cation?

What is gained/lost from an atom to form an ion?

What determines whether an atom will become an anion or cation?

What kind of ions would form from each of these atoms: F, Cl, Br, I, O, S, N, P, Li, Na, K, Rb, Cs, Be, Mg, Ca

- Can you convert ionic chemical formulas into names?

Convert these chemical formulas to names:  $\text{RbI}$ ,  $\text{K}_2\text{O}$ ,  $\text{BeS}$ ,  $\text{Ca}_3\text{P}_2$ ,  $\text{Cu}_3(\text{PO}_4)_2$ ,  $\text{Ag}_2\text{O}$ ,  $\text{FeCl}_2$ ,  $\text{AlCl}_3$ ,  $(\text{NH}_4)_2\text{O}$ ,  $\text{BaS}$ ,  $\text{Na}_3\text{PO}_4$ ,  $\text{MgSO}_4$ ,  $\text{Fe}_2(\text{CO}_3)_3$ ,  $\text{MgO}$

- Can you convert ionic names into chemical formulas?

Convert each of these chemical names to formulas: sodium oxide, rubidium nitride, beryllium fluoride, scandium sulfide, aluminum phosphide, potassium hydride, copper (II) chloride, zinc nitrate, iron (II) phosphate, lead (IV) cyanide, ammonium bromide, cobalt (III) chlorate, hydrogen fluoride, magnesium bicarbonate, copper (I) thiocyanide, iron (III) dichromate, potassium permanganate, sodium hydroxide, cobalt (II) acetate, ammonium nitrate, lithium hydride, hydrogen cyanide

- What are some properties of ionic solids?

### Covalent Compounds

- Can you convert covalent chemical formulas into names?

Write the name for:  $\text{NO}$ ,  $\text{N}_2\text{O}_5$ ,  $\text{N}_2\text{O}$ ,  $\text{SbF}_5$ ,  $\text{CCl}_4$ ,  $\text{P}_4\text{O}_{10}$ ,  $\text{Cl}_2\text{O}_7$ ,  $\text{OF}_2$ ,  $\text{SF}_6$ ,  $\text{B}_2\text{H}_6$ ,  $\text{SiO}_2$ ,  $\text{NI}_3$ ,  $\text{P}_3\text{N}_5$ ,  $\text{S}_7\text{O}_2$

- Can you convert covalent names into chemical formulas?

Write the chemical formula for: oxygen difluoride, selenium dichloride, nitrogen monoxide, dinitrogen pentoxide, nitrogen dioxide, antimony pentafluoride, boron trichloride, diarsenic pentoxide, tetraphosphorous pentasulfide, disilicon hexabromide

### Chemical Reactions

- Can you balance chemical reactions?
- Can you identify reactions as **synthesis, decomposition, combustion, single displacement or double displacement**?
- Can you predict whether a single displacement reaction will occur? If it *will* occur, can you predict what the products will be?
- Can you predict whether a double displacement reaction will occur? If it *will* occur, can you predict what the products will be?

### Acids and Bases

- Can you identify chemicals as acids or bases?
- Have you memorized the 8 acids you need to know the names of?
- Can you explain pH scale? Where are acids on the scale, and where are bases?
- Can you predict the products of neutralization reactions?
- Can you explain acid raid and antacids?